Abstract

Energy-saving operation of dishwashers (110; 410) plays a major role in particular for relatively large concerns, for example for canteens in hospitals or large companies, and also in the field of medical disinfection. A method and an apparatus are thus proposed in which a group of electrical load elements (14, 15, 18, 19, 22, 23, 26, 33; 418, 420, 432, 438) in a dishwasher (110; 410) is assigned a maximum electrical total power. Furthermore, each electrical load element (14, 15, 18, 19, 22, 23, 26, 33; 418, 420, 432, 438) in this group is assigned at least two power levels. An optimum combination of power levels is then selected in a demand determination step, as a function of an operating state B of the dishwasher (119), with the selected power level for each load element (14, 15, 18, 19, 22, 23, 26, 33; 418, 420, 432, 438) being matched to the power demand of that load element (14, 15, 18, 19, 22, 23, 26, 33; 418, 420, 432, 438) in the operating state B, and with the total power of all the load elements (14, 15, 18, 19, 22, 23, 26, 33; 418, 420, 432, 438) not exceeding the maximum electrical total power. Furthermore, the operation of the dishwasher (110; 410) can be subdivided into three phases, a starting phase, a switched-on phase and a load regulation phase. The power levels of the individual load elements (14, 15, 18, 19, 22, 23, 26, 33; 418, 420, 432, 438) are optimally matched to the demand in these operating phases, and it is also possible to react to fluctuations in the operating state. In comparison to conventional methods for controlling dishwashers (110; 410), the proposed method leads to considerable energy savings and results in the dishwashers (110; 410) becoming ready to operate more quickly when switched on.

(Figure 3)